

WHAT IS CLAIMED IS:

1. A method of detecting denial of service (DoS) attacks in an internet accessible network having at least one proxy server incorporating a session initiation protocol (SIP), comprising detecting any substantial
5 imbalance between an accounting of SIP INVITE (INV) and SIP 180 (N_{180}) and providing an indication of the presence of a current DoS attack on said proxy server.

2. The method of detecting denial of service attacks in an internet accessible network as defined in claim 1 wherein the number (H) of INVITE messages including
5 credentials (INV_c) that are sent from a user client in response to an authentication required (407) message from the proxy server are removed from the accounting before the balance is tested such that the equation:

$$INV_o \text{ to } + INV_c - H = N_{180}$$

is not true within a small margin of error then the
10 presence of a denial of service attack on the proxy server is indicated by the inequality.

3. The method of detecting denial of service attacks in an internet accessible network as defined in claim 2 including causing said proxy server to maintain a call information table for determining the value of H.

4. The method of detecting denial of service attacks in an internet accessible network having at least one proxy server as defined in claim 2 wherein the values of H , INV_0 , INV_c and N_{180} are reset after denial of service attacks has been detected.

5. A system for detecting denial of service attacks against session initiation protocol elements in a internet accessible network having at least one proxy server, comprising means at said proxy server for determining if the number of INVITE messages including credentials (INV_c) sent to said proxy server from user clients in response to an authentication requirement and providing an indication of a DoS attack when the number of INVITE messages exceeds a predetermined level.

6. A system for detecting denial of service attacks in an internet accessible network having at least one proxy server incorporating session initiation protocol (SIP), comprising said proxy server including means for detecting any substantial imbalance between an accounting of SIP INVITE (INV) and SIP 180 Ringing and means providing indication of the presence of a current denial of service attack on said proxy server.